

CLAIMS

1. A nucleic acid that encodes the coat protein of Mirafiori lettuce virus, comprising (a) or (b) below:
 - 5 (a) a nucleic acid that encodes a protein comprising the amino acid sequence of SEQ ID NO: 2;
 - (b) the nucleic acid of (a) that encodes a coding region of the nucleotide sequence of SEQ ID NO: 1.
- 10 2. The nucleic acid of claim 1, wherein the nucleic acid is an RNA.
3. The nucleic acid of claim 1, wherein the nucleic acid is a DNA.
- 15 4. A DNA that encodes a sense RNA complementary to the complementary strand of the nucleic acid of claim 2.
5. A DNA that encodes an antisense RNA complementary to the
20 nucleic acid of claim 2.
6. A DNA that encodes an RNA having ribozyme activity to specifically cleave the nucleic acid of claim 2.
- 25 7. A vector that comprises the nucleic acid of claim 3.
8. A transformed cell that comprises the nucleic acid of claim 3 or the vector of claim 7.
- 30 9. A protein encoded by the nucleic acid of claim 1.
10. An antibody that binds to the protein of claim 9.
11. A method for producing the protein of claim 9, wherein said
35 method comprises the steps of:
 - (a) culturing the transformed cell of claim 8; and

(b) recovering the expressed protein from said transformed cell or its culture supernatant.

12. A vector that comprises the DNA of any one of claims 4 to 6.

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13. A transformed plant cell which carries the nucleic acid of claim 1, the DNA of any one of claims 4 to 6, or the vector of claim 7 or 12.

10 14. A transformed plant that comprises the transformed plant cell of claim 13.

15. A transformed plant that is a progeny or clone of the transformed plant of claim 14.

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16. A propagation material of the transformed plant of claim 14 or 15.

20 17. A method for diagnosing Mirafiori lettuce virus infection, wherein said method comprises the step of:
detecting the nucleic acid of claim 1 or the protein of claim 9 in a plant cell or in *Olpidium brassicae*, which is a fungal vector of Mirafiori lettuce virus.